

Characterization of the *Tadorna ferruginea* (Pallas, 1764) [Ruddy Shelduck] nests at its nesting areas in the Middle Atlas, Morocco

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ABSTRACT:

Reproduction of *Tadorna ferruginea* (Pallas, 1764)[Ruddy Shelduck] was studied in the two lakes of Middle Atlas, Morocco namely Afennourir lake and Sidi Ali lake. This water Duck is unusual to build nests at the cedar forests around these lakes. Most nests are placed in the holes in cedar trees (*Cedrus atlantica*) located at heights varying between 5 and 25m and an average distance of 3km lake. To characterize the nests of Ruddy Shelduck and analyze intrinsic determinants of the choice of type of nest, we conducted a factor analysis of Mixed Data (FAMD) of 13 mesological descriptors studied in 22 nests around the two lakes viz., Afennourir and Sidi Ali. This treatment was performed on the basis of morphometric characters and geomorphological data of the nests.

The classification obtained allowed us to highlight the main nest groups that have similarities and correlations between them. On the whole, the density and composition of the forest around the nesting tree, the age of the nest tree, nesting orientation, the nature of the vegetation cover and the persistence of nesting tree on the soil flux are the most explanatory variables that differ in the grouping of nests. The Ruddy Shelduck mainly uses the following techniques to build the nest: Presence of a dense and diverse forest stands with old cedar forests, soil cover flush with the shaft supporting the nest and Southwest orientation or Southeast opening of nests. This analysis confirms that the cedar forests around the Middle Atlas lakes offer good conditions for the construction of nests for this species.

Keywords:

Middle atlas, Morocco, Ruddy shelduck, Reproduction, Nest, Morphometric characteristics, Distribution.